

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A fuel cell system comprising:

a fuel tank storing a fuel comprising dimethyl ether, water, and 5-10 wt% of methanol, the mixing ratio of dimethyl ether and water is in a range of 1:3 to 1:4 ~~an ether, water, and an alcohol;~~

a vaporizer ~~vaporizing~~ configured to vaporize the fuel;

a reformer ~~reforming~~ configured to reform the vaporized fuel into a hydrogen rich gas;

a CO gas removal apparatus configured to remove CO gas in the hydrogen rich gas; and

a fuel cell unit configured to generate electricity by electrochemical reaction of the hydrogen rich gas and oxygen.

2.-6. (Canceled)

7. (Currently Amended) The fuel cell system of claim 1, wherein the fuel tank comprises

a cartridge unit configured to store ~~[[a]]~~ the fuel;

a valve unit configured to close an opening of the cartridge unit;

a holding unit facing ~~to~~ the opening and configured to hold the cartridge unit; and

a supplying unit connected to the holding unit and configured to supply the fuel.

8. (Original) The fuel cell system of claim 7, wherein the cartridge unit stores a dimethyl ether.

9. (Currently Amended) The fuel cell system of claim 1, further comprising:
a combustor ~~combusting~~ configured to combust a gas supplied from the fuel cell unit;
and

a vacuum heat insulation container containing the combustor, containing the vaporizer, the reformer, and the CO gas removal apparatus disposed adjacent to the combustor.

10. (Original) The fuel cell system of claim 1, wherein the reformer contains a reforming catalyst of an alumina and at least one material selected from the group consisting of Rh, Pd, Pt, and Cu.

11 (Original) The fuel cell system of claim 1, wherein the reformer contains a reforming catalyst to prompt a reforming reaction of the fuel and a shift catalyst to react carbon monoxide generated by the reforming reaction with water.

12.-23. (Canceled)

24. (New) The fuel cell system of claim 1, wherein the fuel tank is a single tank storing the fuel comprising the dimethyl ether, the water, and the methane.

25. (New) A fuel cell system comprising:
a single fuel tank storing a fuel comprising an ether, water, and an alcohol;
a vaporizer configured to vaporize the fuel;
a reformer configured to reform the vaporized fuel into a hydrogen rich gas;
a CO gas removal apparatus configured to remove CO gas in the hydrogen rich gas;
and
a fuel cell unit configured to generate electricity by electrochemical reaction of the

hydrogen rich gas and oxygen.

26. (New) The fuel cell system of claim 25, wherein the fuel includes a dimethyl ether.

27. (New) The fuel cell system of claim 25, wherein the fuel includes a methanol.

28. (New) The fuel cell system of claim 25, wherein the fuel includes an ethanol.

29. (New) The fuel cell system of claim 25, wherein the fuel includes less than 10 wt% of methanol.

30. (New) The fuel cell system of claim 25, wherein the fuel tank comprises:

a cartridge unit configured to store the fuel;

a valve unit configured to close an opening of the cartridge unit;

a holding unit facing the opening and configured to hold the cartridge unit; and

a supplying unit connected to the holding unit and configured to supply the fuel.

31. (New) The fuel cell system of claim 30, wherein the cartridge unit stores a dimethyl ether.

32. (New) The fuel cell system of claim 25, further comprising:

a combustor configured to combust a gas supplied from the fuel cell unit; and

a vacuum heat insulation container containing the combustor, containing the vaporizer, the reformer, and the CO gas removal apparatus disposed adjacent to the combustor.

33. (New) The fuel cell system of claim 25, wherein the reformer contains a reforming catalyst of an alumina and at least one material selected from the group consisting of Rh, Pd, Pt, and Cu.

Application Serial No.: 10/810,715
Reply to Office Action dated May 21, 2007

34. (New) The fuel cell system of claim 25, wherein the reformer contains a reforming catalyst to prompt a reforming reaction of the fuel and a shift catalyst to react carbon monoxide generated by the reforming reaction with water.